3-27-2019

Minimizing Unplanned Extubations in the Intensive Care Nursery

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Graduate Nurse Residency Program

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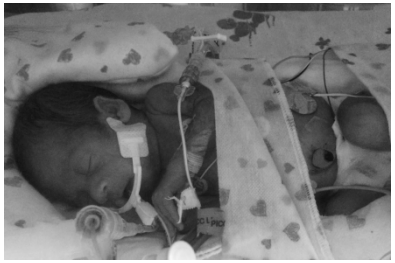

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ACCREDITED PRACTICE TRANSITION PROGRAM AMERICAN NURSES CREDENTIALING CENTER

UMKC School of Medicine

BEST CHILDREN'S HOSPITALS U.S.News RANKED IN 10 SPECIALTIES 2018-19

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Acknowledgements

- Dr. Jean Pallotto
- Janet Klein MSN, RN
- Brittney Hunter BSN, RN, CPN and Jenny Mckee BSN, RN, NIC-RNC, CPST
- Beckie Palmer RN, MSN

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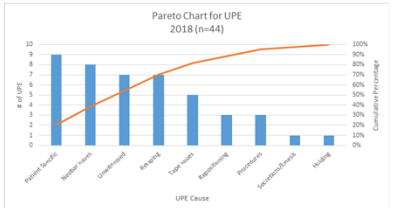
A3 Overview

A3 for Problem Solving

Focus: Reducing Unplanned Extubations in the Intensive Care Nursery	**Owner: ICN Graduate Nurse Resident Team**	**Date: 10/22/2018**
A3 Team: Lindsay Barrosse, Cassidy Horton, Blaire Collins, Jodie Seitzer	**Department Director Signature:**	**KT Scholar: Brittney Hunter**

Clarify the Problem Patients that experience an unplanned extubation (UPE) in the Intensive Care Nursery (ICN) can have complications such as increased length of stay, code events, airway trauma, hypoxemia and pulmonary injury. The lack of standardization of Endotracheal tube (ETT) management is a contributing factor to increased UPEs. By ensuring compliance of a standardized process for ETT management, we hope to achieve a reduction in UPEs in the Children's Mercy ICN. The current goal for the ICN at Children's Mercy is <1 UPE out of 100 ventilator days and the ICN year to date current rate of UPE is 1.2.

Break Down the Problem



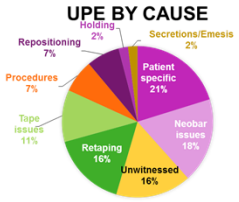
Set a Target

Target goal is to increase holding of ET tube during an x-ray from 48% to 70% by February 1, 2019.

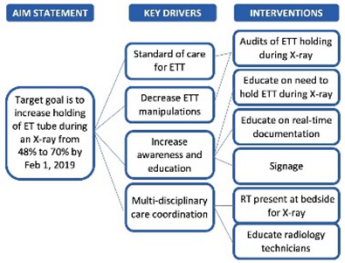
Identify Root Cause

The 4 biggest root causes, accounting for just over 70% of UPEs are:

- Patient specific
- Neobar issues
- Retaping
- Unwitnessed



Develop and Implement Countermeasures



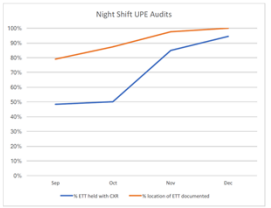
Check Results and Process

ETT held during X-ray:

September	48%	*(30/62)*
October	50%	*(32/64)*
November	85%	*(34/40)*
December	94%	*(17/18)*

Documentation indicating location during X-ray:

September	79%	*(49/62)*
October	88%	*(56/64)*
November	98%	*(39/40)*
December	100%	*(18/18)*



Standardize and Follow Up

- The process needs to be standardized to implement safe management of all patients.
- We followed all intubated patients to collect our data.
- Unit committee will continue to audit and monitor compliance to standards. If compliance decreases, then unit will re-educate or re-approach and find a different process that is effective. If successful, we will share our knowledge and spread to other populations.

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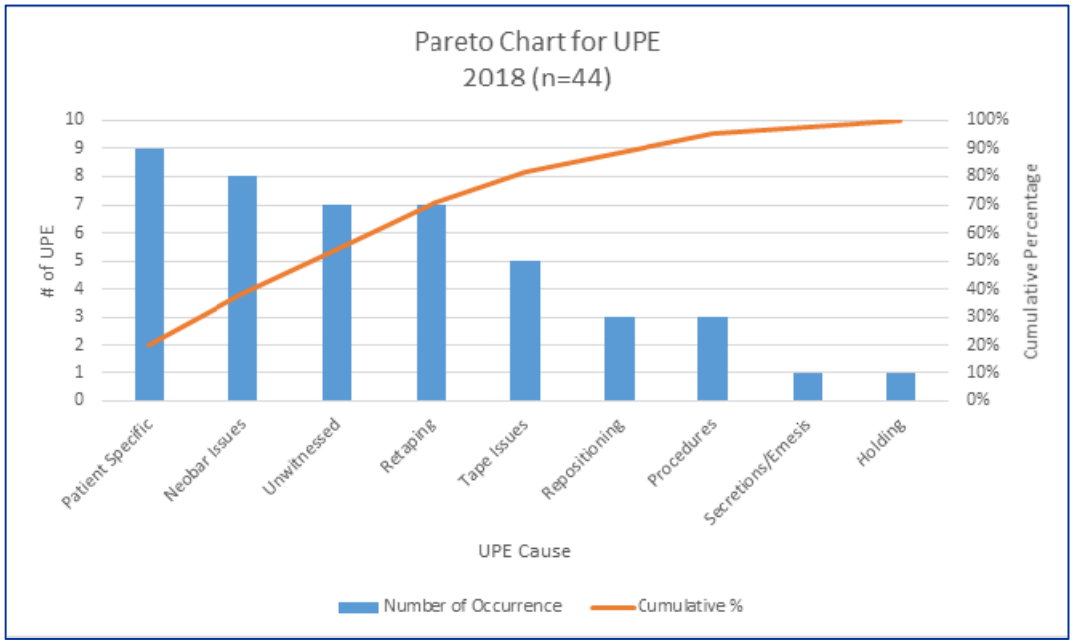
Clarify the Problem

Patients that experience an unplanned extubation (UPE) in the Intensive Care Nursery (ICN) can have complications such as increased length of stay, code events, airway trauma, hypoxemia, and pulmonary injury. The lack of standardization of Endotracheal Tube (ETT) management is a contributing factor to increased UPEs. By ensuring compliance of a standardized process for ETT management, we hope to achieve a reduction in UPEs in the Children's Mercy ICN. The current goal for the ICN at Children's Mercy is <1 UPE out of 100 ventilator days and the ICN year to date current rate of UPE is 1.2.

Breakdown the Problem



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Set a Target

- Target goal is to increase holding of ET tube during an x-ray from 48% to 70% by February 1, 2019.

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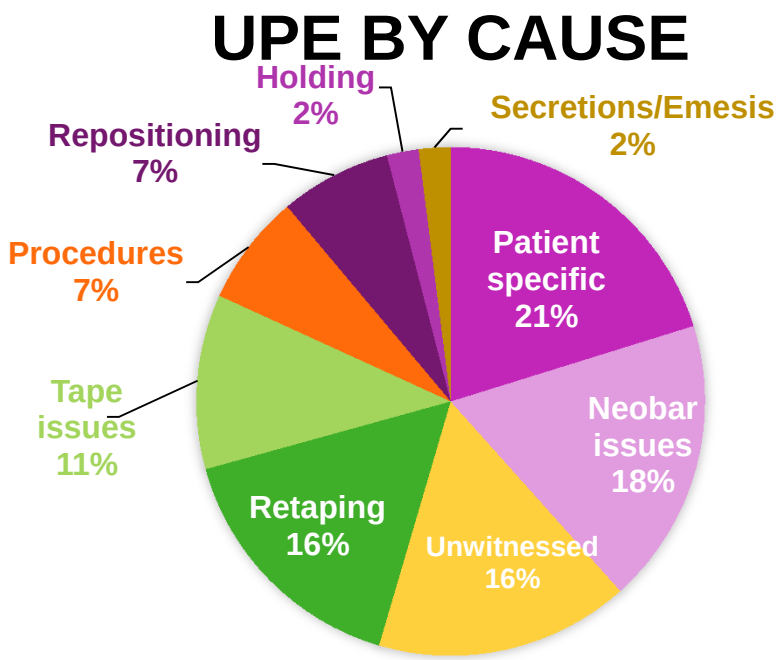
Identify Root Cause

Inconsistent application of ET tube expectations

- ET tube will be held during chest X-rays
- Location of ET tube during X-rays will be documented real-time



Jan – Oct 15, 2018 (n=44)

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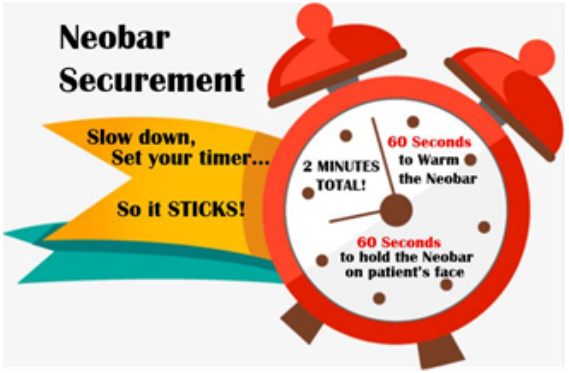
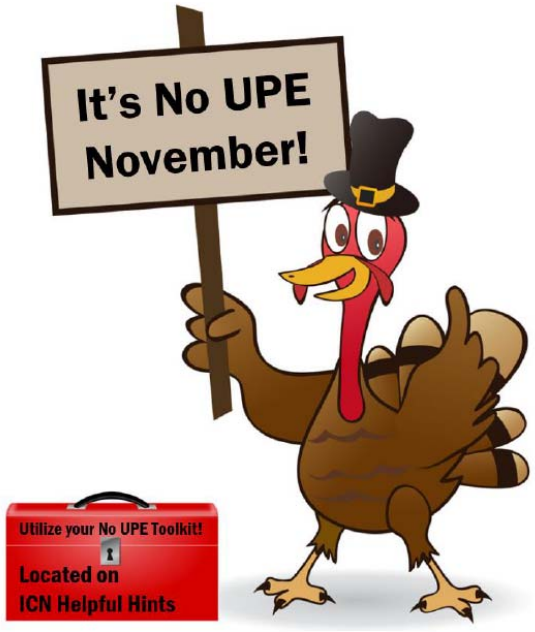
No UPE November

Education & Training in the ICN

- Practice changes
- Expectations for chest x-ray
- No UPE toolkit
- Charting change
- Education reminders





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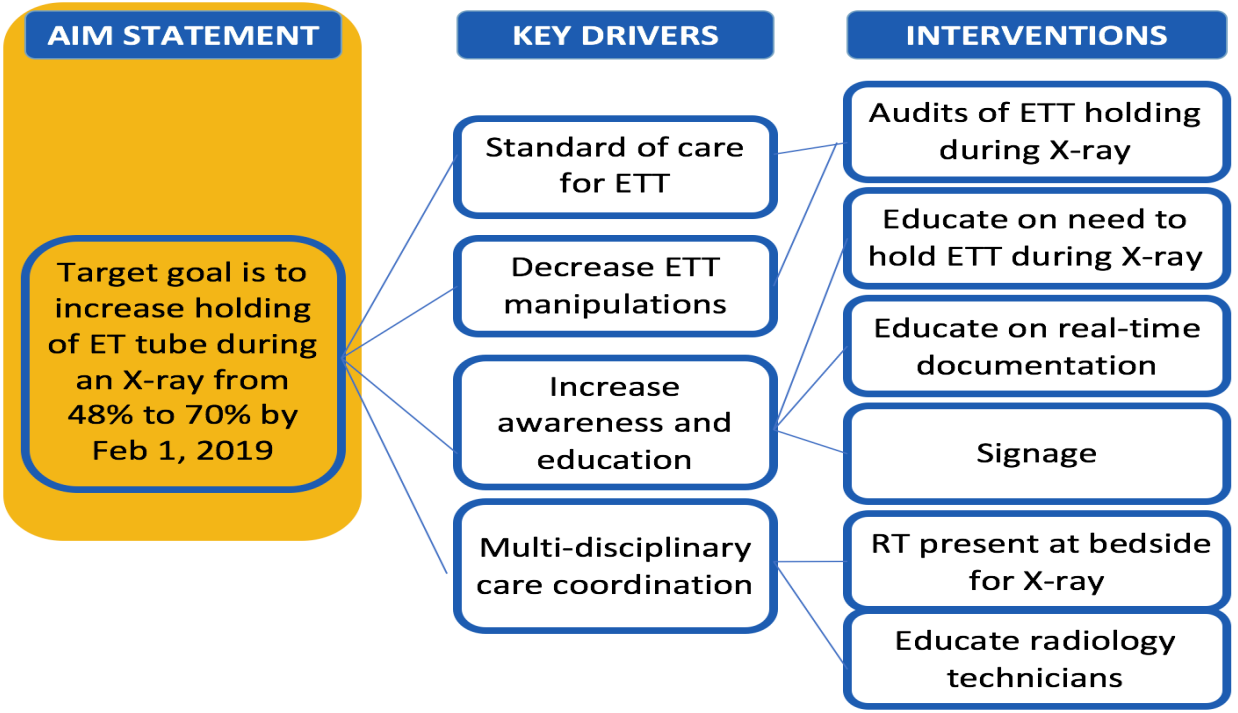
Develop and Implement Countermeasures



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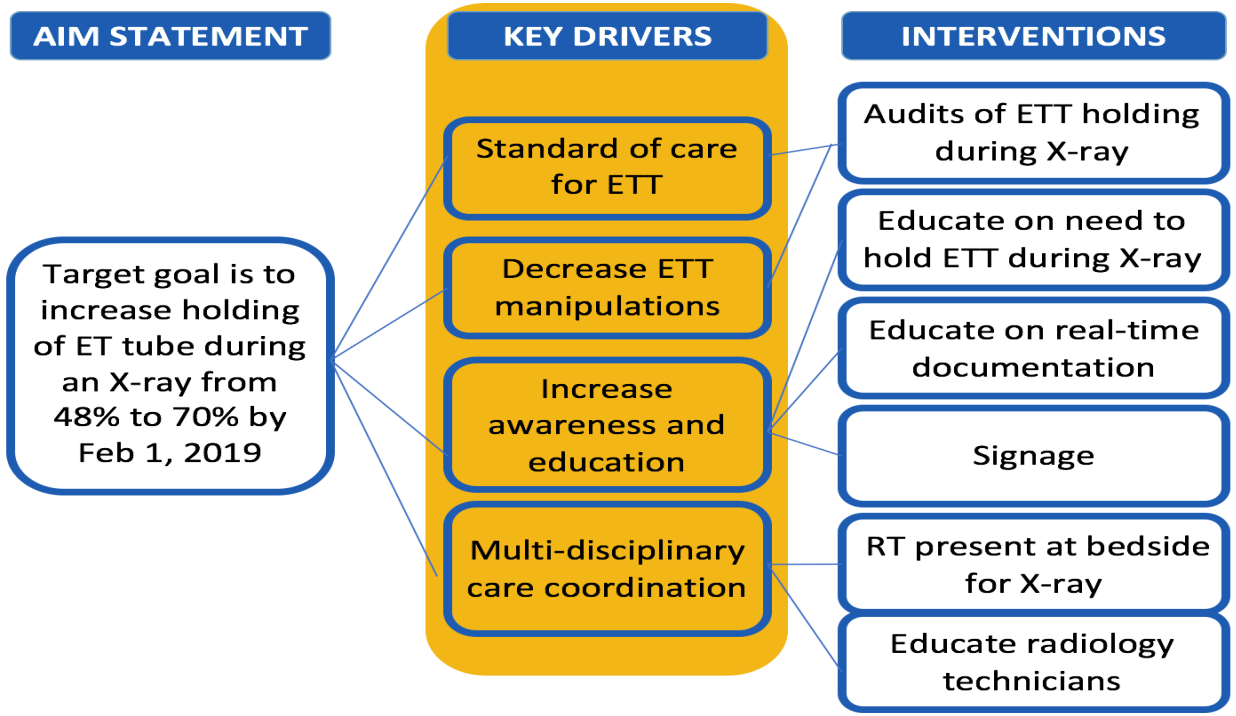
Develop and Implement Countermeasures



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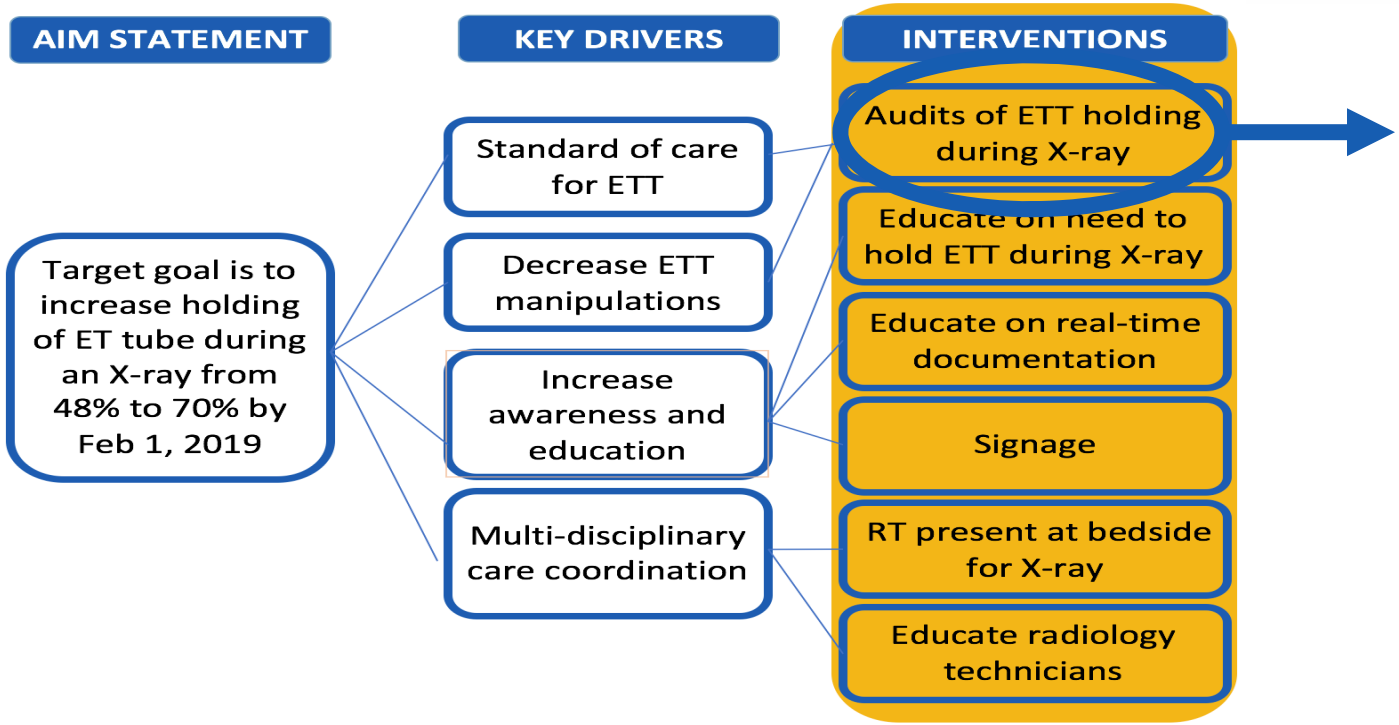

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Develop and Implement Countermeasures

No UPE November: Holding ETT during Chest Tube Audit			
Date:	Bedspace:		
			Comments
Was a CXR done during shift?	YES ☐	NO ☐	
If yes, was ETT held during CXR?	YES ☐	NO ☐	
If held, by whom?	RN ☐ RT ☐ NNP ☐ MD ☐		
If CXR was done, was documentation completed noting location of ETT during CXR?	YES ☐	NO ☐	
For all ETT patients:			
Does RN know position of ETT is to be documented for all CXRs?	YES ☐	NO ☐	
Does RN know where to document position of ETT for CXRs?	YES ☐	NO ☐	

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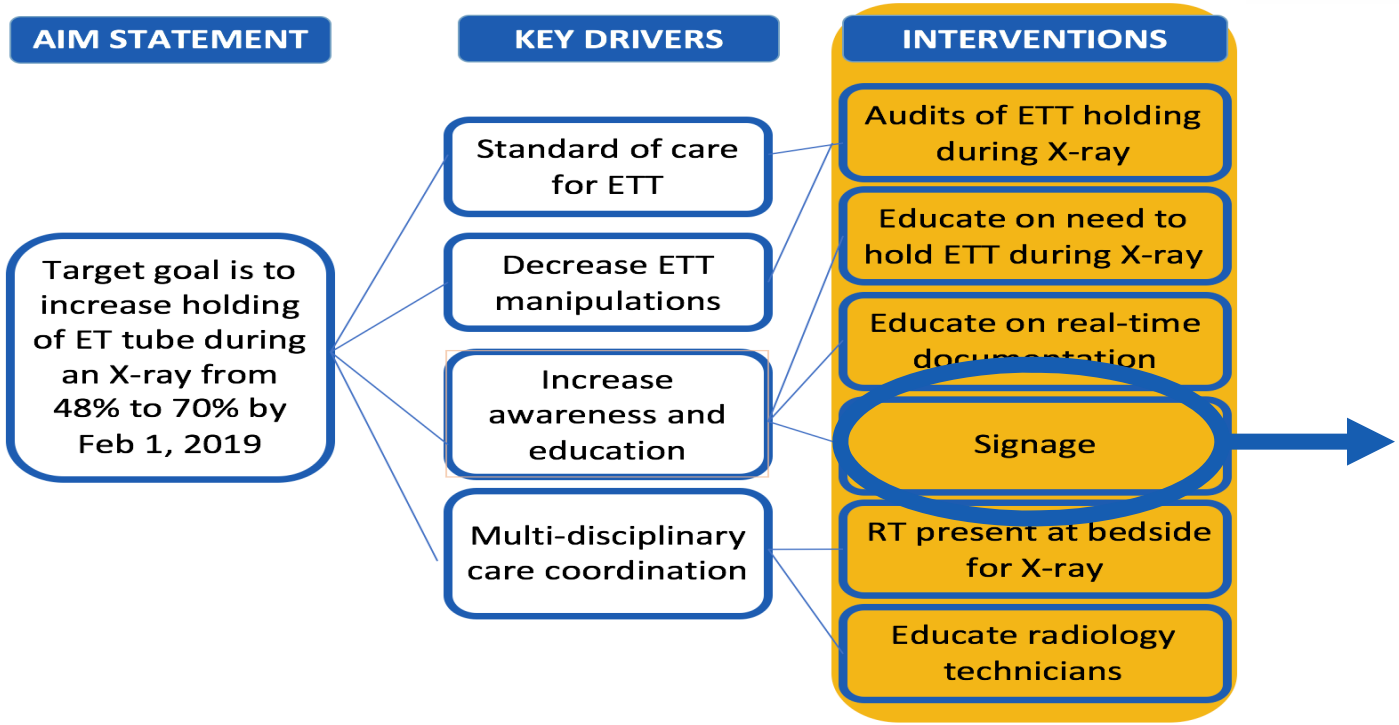
Develop and Implement Countermeasures



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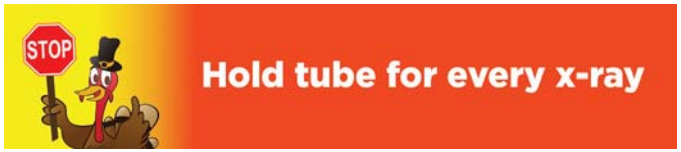
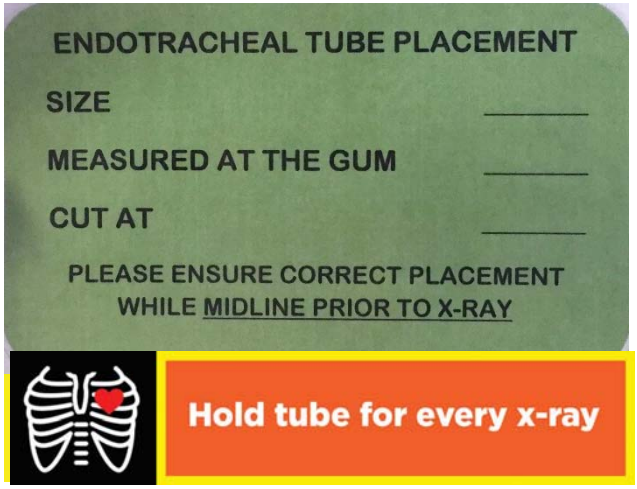
Signage for ETT Cards

Design for No UPE November



Design #2 for everyday use



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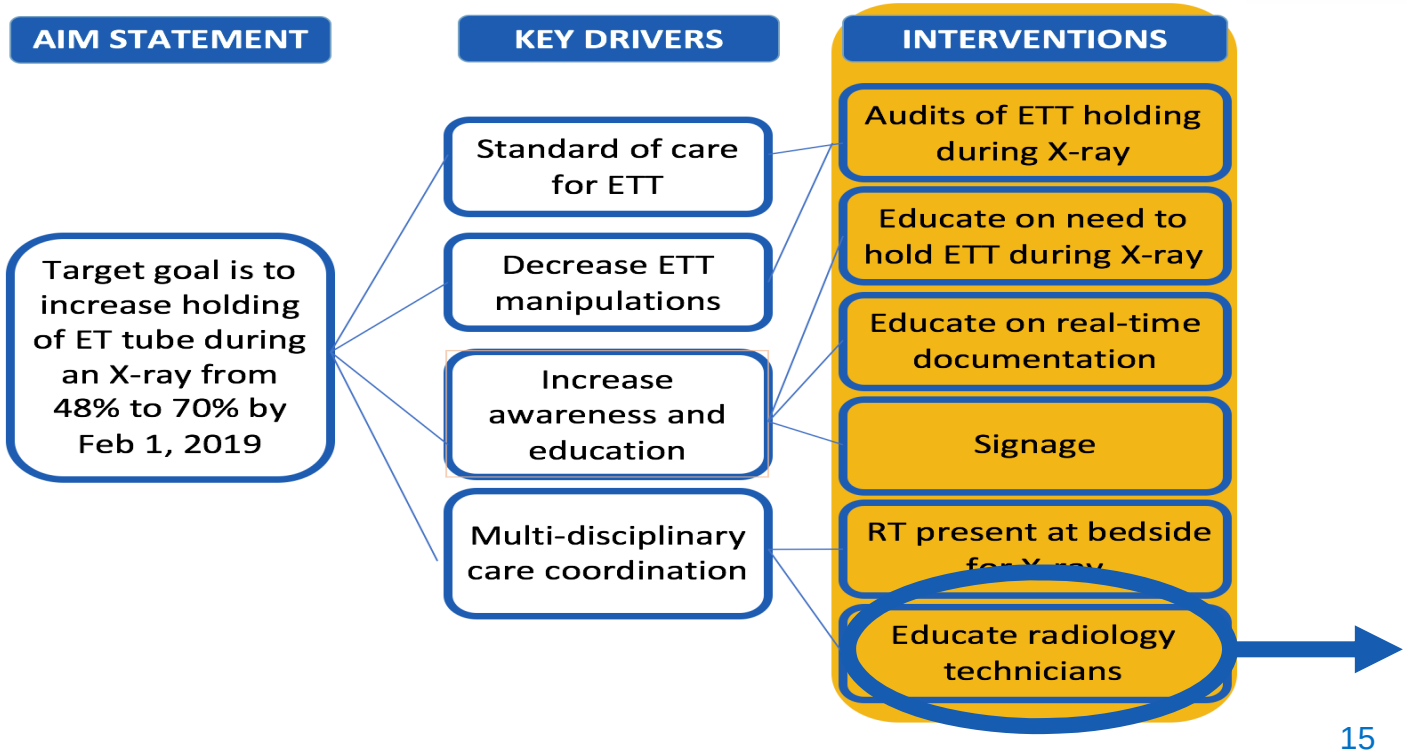
Develop and Implement Countermeasures



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Intubated patients

Please make sure an RT and RN are present to verify tube placement and to hold the tube during every x-ray.

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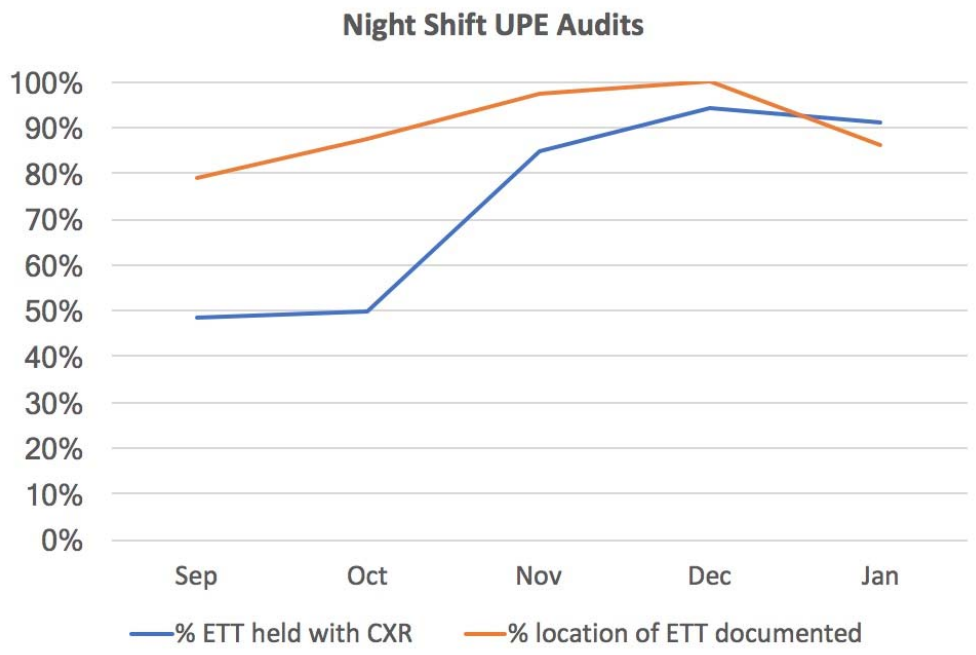
Check Results and Process

ETT held during X-ray:

September	48%
October	50%
November	85%
December	94%
January	91%

Documentation indicating location during X-ray:

September	79%
October	88%
November	98%
December	100%
January	86%



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Questions

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